

## ENVIRONMENTAL ASSESSMENT, FONSI AND DECISION RECORD

BLM, Bishop Field Office  
785 N. Main St, Suite E  
Bishop, CA 93514

**EA Number:** CA-170-05-29

**Lease/Serial/Case File No.:** CACA 30866 CA-017-MN2-71

**Proposed Action Title/Type:** Mill ore trucked in from Gold Bug mine in Ballarat, CA. at the Bishop Mill site.

**Location of Proposed Action:** T. 6 S., R. 33 E., Section 4 SW ¼.

**Applicant (if any):** Gordon Stavish

**Plan Conformance:** The proposed action is subject to the Bishop Resource Management Plan, approved March 25, 1993. The proposed action has been reviewed and is in conformance with the plan.

### **Need for Proposed Action:**

This mill was constructed in 1985 as a dependent mill site, in connection with claims on USFS administered land. In 1985 Don Beauregard operated the claims and built the mill. Don Beauregard applied for a patent to the claims on the USFS lands. That patent was not issued and the claims were not utilized to support mill operations. Since that time Gordon Stavish has since taken over ownership of this Millsite and is submitting a Plan of Operations to operate the mill. A bond for \$67,160.00 is to be submitted for the current reclamation of the site. Currently Gordon Stavish has located these claims and has a Certificate of Deposit bond held in BLM's name for \$12,000.00. Proposed operations would not start until the additional \$67,160.00 bond is submitted to BLM and all other required state permits and bonds are submitted to the appropriate agency.

This is an existing millsite, however, no EA was found in the case files. A cultural clearance report was found in the files dated 8/12/82. Since a cultural resources inventory report, CA-170-99-10 was completed for a proposed mill operation in 1998, this report will cover this current proposed action.

### **Description of Proposed Action:**

The proposed action is to activate the mill site operations for 5 years. Ore would be stockpiled from the Gold Bug mine at the rate of 10 to 12 tons per day on the ore patio until the mill feed stockpile reaches 1,000 tons. The ore patio measures 40 ft. by 80 ft. and would be filled after about 3 ½ months of trucking the ore. Then the mill would be started and operated on a continuous basis (24 hours per day in two 12 hour shifts, 5 days per week) until the ore is depleted from the stock pile. It is anticipated that mill would process 16 to 24 tons per day the second year of operation. An existing well would be used to provide water fro the proposed operation.

The Gold Bug mine is located at T. 22 S., R. 34 E., Sec. 12 & 13, and is between Middle Park Canyon and Pleasant Canyon, Ballarat, Inyo County, California. The Gold Bug Mine is currently

operating under an approved Plan of Operations on file with the Ridgecrest Field Office of BLM, serial number, CA 32911.

Thomas Whitman, (owner of Gold Bug mine), Roger Smith (consulting Geologist) and Ken Lloyd (transporter) are involved in this operation with Gordon Stavish who holds the independent mill site claims.

Site reclamation would be initiated at the end of proposed operations if no extensions to the Plan of Operation are filed. Site reclamation would consist of removal of buildings, recontouring of the slopes and reseeded. Operator has been notified that he must comply with SMARA administered by Inyo County, waste discharge permit requirements from Lahontan Regional Water Quality Control Board (LRWQCB) and potentially the California Toxics Board.

#### Description of Mill Process:

The raw gold-silver ore is imported to the site and stockpiled in the ore patio located just above the mill building. The raw ore is then loaded into the ore feed bin (25 Tons capacity) by a front end loader, then gravity fed to the mill at the rate of approximately 1 ton per hour, or approximately 10 to 12 tons per 12-hour shift. The raw gold-silver ore is first fed to a primary jaw crusher (10" x 20") and crushed to ½ inch diameter, then to a secondary cone crusher to further reduce the rock size to ¼-inch diameter, then to a secondary cone crusher to further reduce the rock size to ¼-inch diameter as necessary, the ore is then transferred to the fine ore bin (40 ton capacity) via bucket elevator.

Ore is moved from the fine ore bin to a 5' x 4' ball mill for further size reduction, to minus 150 mesh, and the addition of the first chemicals in the process. At this point a general collector, Xanthate 350, is drip fed into the ball mill at ½ milliliter per ton of ore (prediluted in water at ½ lb. per gallon). Aero 208 (a free gold collector) and Aero 31 (a sulfide collector) are also drip fed at this time at rates of one milliliter per minute (prediluted 2 cups per gallon) and ¾ milliliter per minute respectively (60 and 40 milliliters per ton equivalent). Soda ash would be added to the ball mill as necessary to maintain the pH at 6.8+.

The out flow from the ball mill goes to the rake classifier, which returns the oversize material back to the ball mill for re-grinding. Once all ore is reduced to an acceptable size, it is transported to the conditioning tank where the flotation reagent chemicals are allowed to mix for 30 minutes creating chemically charged ore slurry.

The chemically charged ore slurry is then conveyed to the No. 1 rougher/flotation cell where a frothing agent, Aero Froth, is added (1/3 milliliter per minute or 20 milliliter per ton), this facilitates metal recovery. The flotation cells, with addition of frothing agents, create an agitated air-infused froth. The air bubbles collect the chemically charged metallic particles and bring them to the surface of the cell. Each cell in the system collects the frothed metallic particles and transports them to the concentrate/flotation cell. It is following this stage that the tailings are discharged while the concentrate containing the processing chemicals is piped to the thickener tank. The thickener tank de-waters the concentrate allowing most of the additive chemicals to be re-circulated into the processing system for reutilization. The filtered and air dried concentrate is then loaded into drums and shipped to a smelter.

The tailings from the flotation cells are passed from the last flotation cell to the Launderer tray that feed the Deister, gravity recovery, shaker table where metallic particles that were too large or heavy to be recovered by the flotation process are recovered in the table high line concentrate. At the launderer tray Shaklee's Basic H is added at the rate of ½ gallon (diluted to

1/8 cup per gallon per hour) as a surfactant to reduce the water's surface tension and condition the ore for the gravity table. The Basic H breaks down any remaining flotation chemicals allowing the gold to sink for gravity separation. The table concentrate is then air dried and shipped to the smelter.

From the table, the residual tailings are piped to the magnetic separator, where any remaining iron particles are removed and then to the waste tailings pond located adjacent to the mill building. Throughout the milling process approximately 1,000 gallons of water is used per ton of ore, or 20,000 to 24,000 gallons per day. A portion of the processing water is recycled at the thickener tank and the remaining water is recycled from the tailings pond after the waste rock is allowed to settle out. Some water loss will be due to evaporation.

#### Tailing Ponds:

The slurry in the two unlined tailings ponds that are on site currently would need to be reprocessed. The ponds would neutralize any remaining heavy metal constituents for subsequent onsite burial. This is required by LRWQCB. These ponds have approximately 2,500 tons of material (tails) and are 110 ft. x 250 ft. with a 1 to 6 ft depth providing 1.9 acre/feet capacity.

Three new ponds would be constructed at the site of the existing ponds. Two ponds would be for settling the solids and recirculating of processed water and one would be for water storage and recycling or evaporation. The new tailings ponds would be lined with an impermeable layer of schedule 40, HDPE rubber with welded seams over a six inch layer of clean sand as approved by LRWQCB. The ponds will be surrounded by a 6 foot berm with a 1:1 slope. The first pond will be 120 x 200 x 6 ft. deep. The second tailing/recycle pond would be 120 x 80 x 6 ft. deep and adjacent to the first pond. These two ponds would have a capacity of 4 acre/ft. The third pond would be a storage/recycling/evaporation pond, 30 x 120 x 3 ft deep and is intended as a backup pond.

#### Reclamation:

Reclamation would occur within one year of termination of the project activities at the end of five years. Reclamation would commence with the removal of the mill building, garage and all ancillary structures/equipment. This would include the removal of above ground tanks, trailers, etc. The concrete slab would be cleaned of any spilled chemicals and oil, then broken up and covered with native soil. The whole area would then be graded to match the natural slope of the surrounding area. All slopes would be left at 2:1.

The septic tank would be abandoned in place and filled with clean sand and access holes would be recovered with soil.

The existing well would be abandoned according to the LRWQCB guidelines. The well casing would be filled with bentonite chips to the top of perforations. The remainder of the well would be filled with a 10 sack cement grout to within 5 feet of the surface where it would be cut off and buried with native soil. The pump and piping would be removed and disposed of. The electrical power lines would be removed and the power poles cut to ground level. The underground power lines would be severed up to the mill site claim boundary. Within the mill site claim boundary the underground and above ground power lines would be dug up and removed from the site and the trench would be backfilled with native soil.

Once final grading of the disturbed areas is completed the site would be seeded with the seed mix recommended by BLM Botanist (see Description of Mitigation Measures below). Seed

mixture is to be applied during the BLM Botanist's recommended time period, usually October thru November. The site would be monitored for one year after seeding to determine BLM acceptance of revegetation density and diversity.

### **Environmental Impacts:**

The proposed action is not within a Wilderness, Wilderness Study Area, Area of Critical Environmental Concern, nor Wild and Scenic River corridor, and there would be no effects on any lands so designated.

There would be no impacts to air quality. The mill site would be required to meet all applicable state and federal air quality standards. Air quality permits to operate required by Unified Great Basin Air Pollution control District (APCD) would be obtained prior to mill operations start up.

There would be no impact to listed or sensitive species. There are no known listed or sensitive species or habitats within the proposed action area.

There would be no impacts to prime farm lands, flood plains.

There is no impact to water quality (including ground or surface waters). All tailing ponds would be lined, monitored and permitted by the LRWQCB with a waste discharge permit. The operator would be responsible for obtaining these permits and is required to have these prior to starting operations.

There would be no disproportionate impacts to low income or minority groups, per Executive Order 12898 (2/11/94).

### **Cultural resources**

The Bishop Field Office archaeologist, Kirk Halford, walked the proposed project area, including all grounds within the fenced mill site utilizing 10-15 meter spaced transects. No sites or isolated finds were recorded. No new disturbance is proposed; therefore, no impacts to Cultural Resources are expected.

### **Visual resources**

The proposed action is within a VRM II Objective. The Bishop RMP States:

“The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen from key observation points, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line color, and texture found in the predominant natural features of the characteristic landscape.”

The key observation viewpoint is Highway 6, located about one mile to the east. The mill was painted a tan color during its construction to conform to the surrounding landforms. The structures angular design features repeat the elements of the asymmetrical landscape creating a complete visual blend as a result of the mills color and design, and the mills location at the toe of the slope of a tan colored pumice escarpment, the mill tends to blend into the landscapes as a seen from Highway 6. No additional structures are proposed. This meets the VRM II conformance and is no impact to visual resources.

### **Vegetation**

Vegetation of the area is sparse and consists of Great Basin flora such as shadscale, oxytheca, desert trumpet. The soil is a Desert pavement, sandy soils. The mill site is an existing structure, no further land disturbance is proposed, there will be no impacts to vegetation.

**Wildlife habitat**

Wildlife of the area includes lizards, snakes, other reptiles and rodents. Monitoring of the tailings ponds would be necessary to identify if the above wildlife would be utilizing the tailings pond water for drinking or swimming. If monitoring indicates that the tailing ponds’ waters are impacting health of reptiles and rodents, then netting the ponds would be required. The mill site is an existing structure, no further land disturbance is proposed, there would be no impacts to vegetation.

**Minerals**

The site is situated along the eastern edge of the Volcanic Tablelands. Parcels north of the mill have had pumice excavated from the sites. Gordon Stavish holds the Bishop Mill site claims, no competing claims are in the area or surrounding the site. There is no impact to minerals.

**Adherence to Local, State and Federal Environmental Ordinances/Laws**

The mill site would be required to meet all applicable state and federal requirements. Air quality standards and permits to operate are required by Unified Great Basin Air Pollution control District (APCD). The proponent is required to obtain these permits prior to mill operations start up.

All tailing ponds would be lined, monitored and permitted by the LRWQCB with a waste discharge permit. The operator is responsible for obtaining these permits and is required to have these prior to starting operations.

**Cumulative effects**

This project would not contribute to any cumulative effects since there are few, if any, mill operations that collectively impact the area’s environmental values.

**Description of Mitigation Measures and Residual Impacts:**

The description of the proposal discusses referring to BLM for the appropriate seed mixture at the time of reclamation.

Here is the seed mixture BLM would require:

Species	Rate
Globe mallow ( <i>Spharalcea ambigua</i> )	1-2 pounds per acre
Rose four-o’clock ( <i>Mirabilis alipes</i> )	1-2 pounds per acre
Desert alyssum ( <i>Lepidium fremontii</i> )	1-2 pounds per acre
bur-sage ( <i>Ambrosia dumosa</i> )	2 pounds per acre
Four-wing salt bush ( <i>Atriplex canescens</i> )	7 pounds per acre
Shadescale ( <i>Atriplex conferifolia</i> )	1 pound per acre
Cheese-bush ( <i>Hymenoclea salsola</i> )	1 pound per acre
Mojave indigo bush ( <i>Psoralethamnus arborescens</i> <i>var. minutifolius</i> [= <i>Dalea fermitii</i> <i>var. minutifolius</i> ])	2 pounds per acre
desert needlegrass ( <i>Achantherum speciosum</i> [= <i>Stipa speciosa</i> ])	½ pound per acre

winter fat (*Krascheninnikovia [=Eurotia] lanata*)

1 pound per acre

Seeding rate is given in pounds of pure live seed (PLS) per acre and are based on percent purity and germination rates.

The purchase of this seed should be made 2 years prior to broadcasting the seed. BLM highly recommends that the seed be purchased from Comstock Seed, the seed supplier in Reno two years ahead of final closure. Operator can bank the seed two years ahead with Comstock to ensure the availability.

Seed would be broadcast and then mixed into the top 0.5 inch of the substrate by either raking or dragging a chain across the seedbed, or other suitable method.

Residual impacts after successful rehabilitation would be minimal and consist of less dense vegetation and softened physical contours on the slope.

**Implementation Monitoring:**

Monitoring would be completed by wildlife biologist or other specialist for reptile or rodents activity around the tailings ponds.

Monitoring would be completed by Ranger and Geologist for yearly compliance with 43 CFR 3809, and 43 CFR 3715. Occupancy by living on the site is not proposed.

Monitoring for air emissions and waste water discharge would be completed by the Unified Air Pollution Control Board (UAPCB) and Lahontan Water Quality Control Board (LWQCB). Both are State of California agencies.

**Persons/Agencies Consulted:**

Larry Cameron-(APCD)  
Doug Fayey- (Lahontan Regional Water Quality Control Board)

**Preparer(s):**

Cheryl Seath (Bishop FO Geologist)  
Joe Pollini (Bishop FO NEPA Coordinator)  
Kirk Halford (Bishop FO Archeologist)  
Terry Russi (Bishop FO Supervisory Wildlife Biologist)

**Date:**

**Reviewed By:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Environmental Coordinator**

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**FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD**

I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action with the mitigation measures described below would not have any significant impacts on the human environment and that an EIS is not required.

I have determined that the proposed project is in conformance with the Bishop Resource Management Plan, which was approved March 25, 1993. This plan has been reviewed, and the proposed action conforms with the land use plan terms and conditions as required by 43 CFR 1610.5.

The proposed mill site would be required to meet all applicable state and federal requirements. Air quality standards and permits to operate are required by Unified Great Basin Air Pollution control District (APCD). The proponent is required to obtain these permits prior to mill operations start up.

All tailing ponds are to be lined, monitored and permitted by the LRWQCB with a waste discharge permit. The operator is responsible for obtaining these permits and is required to have these prior to starting operations.

The action would not to adversely affect threatened or endangered species.

It is my decision to implement the project with the mitigation measures identified below and approve the Plan of Operations as submitted by Mr. Stavish. It is in the public's interest to allow Mr. Stavish the opportunity to run his independent mill in order to process ore from the Gold Bug mine in Ballarat, California.

**Mitigation Measures/Remarks:**

The description of the proposal discusses referring to BLM for the appropriate seed mixture at the time of reclamation.

Here is the seed mixture BLM will require:

<u>Species</u>	<u>Rate</u>
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**Authorized Official:** \_\_\_\_\_  
Bill Dunkelberger, Field Office Manager

**Date:** \_\_\_\_\_